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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,605	03/30/2001	Thomas P. McGovern	CM03929H	8211

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EXAMINER	
MILLER, BRANDON J	

ART UNIT	PAPER NUMBER
2683	5

DATE MAILED: 05/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/822,605	Applicant(s) MCGOVERN ET AL.	
	Examiner Brandon J Miller	Art Unit 2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2004* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10 and 12-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10 and 12-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dunn in view of Eswara.

Regarding claim 1 Dunn teaches a method of achieving a dynamic channel bandwidth in a system and initializing a channel aggregation strategy (see col. 10, lines 46-51 and col. 12, lines 16-18). Dunn teaches establishing a reserved channel aggregation (see col. 15, lines 22-26). Dunn teaches receiving a request for a service requiring additional bandwidth on either the inbound path or the outbound path from a device (see col. 11, lines 15-18 and col. 12, lines 17-20 & 25-28). Dunn teaches generating an updated channel aggregation based upon a request and a channel aggregation strategy to create an updated channel aggregation (see col. 12, lines 26-32). Dunn teaches signaling the updated channel aggregation to at least on mobile station (see col. 12, lines 26-36). Dunn teaches establishing a channel aggregation for an inbound path and outbound path (see col. 12, lines 17-26). Dunn does not specifically teach establishing a default channel aggregation for an inbound path using at least one frequency from at least one site, establishing a default channel aggregation for an outbound path using at least one frequency from at least one site, or signaling via an in-band message. Dunn does teach signaling the updated channel

aggregation to at least on mobile station via a message (see col. 12, lines 16-37). Eswara teaches establishing a default channel aggregation for communication using at least one frequency from at least one site (see col. 4, lines 42-45 & 49-50, col. 6, lines 49-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include establishing a default channel aggregation for an inbound path using at least one frequency from at least one site, establishing a default channel aggregation for an outbound path using at least one frequency from at least one site, and signaling via an in-band message because this would allow for the user of a mobile device to be allocated variable bandwidth on demand by aggregation of available communication channels.

Regarding claim 2 Dunn teaches aggregating a plurality of channels according to the needed bandwidth and the updated channel aggregation strategy (see col. 6, lines 35-40 and col. 12, lines 20-27).

Regarding claim 14 Dunn teaches a method of achieving a dynamic channel bandwidth in a system and loading reserved channel configuration (see col. 12, lines 16-32 and col. 13, lines 1-11). Dunn does not specifically teach loading a channel scan list and a default channel configuration, scanning a set of channels for a channel with acceptable quality or receiving an in-band message. Dunn does teach receiving a message having an updated channel aggregation, and modifying transmit and receive channels based on the message (see col. 11, lines 16-37 & 62-67 and col. 12, lines 1-8 & 16-42). Eswara teaches loading a channel scan list and a default channel configuration and scanning a set of channels for a channel with acceptable quality (see col. 5, lines 18-22, col. 6, lines 49-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include loading a channel scan

list and a default channel configuration, scanning a set of channels for a channel with acceptable quality or receiving an in-band message because this would allow for the user of a mobile device to be allocated variable bandwidth on demand by aggregation of available communication channels.

Regarding claim 15 Dunn and Eswara teaches a device as recited in claim 14 except for updating a channel scan list and a default channel configuration based on an in-band message. Dunn does teach updating a channel configuration based on a message (see col. 12, lines 37-42). Eswara does teach updating a channel scan list and a default channel configuration (see col. 6, lines 49-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include updating a channel scan list and a default channel configuration based on an in-band message because this would allow for increased efficiency of wireless communication between user devices that demand increased bandwidth for transmission.

Regarding claim 16 Dunn teaches a system for achieving a dynamic channel bandwidth and at least one fixed station (see col. 10, lines 35-51 and col. 12, lines 16-18). Dunn teaches at least one mobile station in radio frequency communication with the at least one fixed site (see col. 10, lines 35-46), and at least one resource microprocessor, controlling the at least one fixed site, for performing aggregating a plurality of channels (see col. 10, lines 20-42). Dunn teaches initiating a channel aggregation strategy (see col. 12, lines 17-28 and col. 15, lines 22-26). Dunn teaches receiving a request for a service requiring additional bandwidth on either the inbound path or the outbound path from a device (see col. 11, lines 15-18 and col. 12, lines 17-20 & 25-28). Dunn teaches generating an updated channel aggregation strategy based upon a request and

a channel aggregation strategy to create an updated channel aggregation (see col. 12, lines 26-32). Dunn teaches signaling the updated channel aggregation to at least on mobile station (see col. 12, lines 26-36). Dunn teaches establishing a channel aggregation for an inbound path and outbound path (see col. 12, lines 17-26). Dunn does not specifically teach establishing a default channel aggregation for an inbound path using at least one frequency from at least one site, establishing a default channel aggregation for an outbound path using at least one frequency from at least one site, or signaling via an in-band message. Dunn does teach signaling the updated channel aggregation to at least on mobile station via a message (see col. 12, lines 16-37). Eswara teaches establishing a default channel aggregation for communication using at least one frequency from at least one site (see col. 4, lines 42-45 & 49-50, col. 6, lines 49-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include establishing a default channel aggregation for an inbound path using at least one frequency from at least one site, establishing a default channel aggregation for an outbound path using at least one frequency from at least one site, and signaling via an in-band message because this would allow for the user of a mobile device to be allocated variable bandwidth on demand by aggregation of available communication channels.

Claims 3-10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dunn in view of Eswara and Sun.

Regarding claim 3 Dunn and Eswara teach a device as recited in claim 1 except for aggregating a plurality of narrowband channels into at least one wideband channel based on the updated channel aggregation. Sun teaches aggregating a plurality of narrowband channels into at least one wideband channel based (see col. 4, lines 54-63). It would have been obvious to one of

ordinary skill in the art at the time the invention was made to make the device adapt to include aggregating a plurality of narrowband channels into at least one wideband channel based on the updated channel aggregation because this would allow for transmitting wideband signals via a communications system adapted for transmitting narrowband signals.

Regarding claim 4 Dunn teaches a plurality of channels that are adjacent (see col. 9, lines 18-20). Sun teaches a plurality of narrowband channels (see col. 4, lines 35-36).

Regarding claim 5 Dunn teaches a plurality of channels that are non-adjacent (see col. 8, lines 63-67 and col. 9, lines 1-10). Sun teaches a plurality of narrowband channels (see col. 4, lines 35-36).

Regarding claim 6 Dun and Eswara teach a device as recited in claim 1 except for dividing at least one wideband channel into a plurality of narrowband channels. Sun does teach dividing at least one wideband channel that overlay one or more narrowband channels into a plurality of data streams (see col. 4, lines 49-52). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include dividing at least one wideband channel into a plurality of narrowband channels because this would allow for a device to be allocated variable bandwidth on demand by aggregation of available communication channels.

Regarding claim 7 Sun teaches a device as recited in claim 6 and is rejected given the same reasoning as above.

Regarding claim 8 Dunn and Eswara teach a device as recited in claim 1 except for a in-band message that comprises at least one of a next bandwidth and center frequency of a transmitter and a receiver of a fixed site, a minimum time duration of a next receive state of a

fixed site, or a minimum time duration of a next transmit state of a fixed site. Dunn does teach a message that includes a next bandwidth of a transmitter and a receiver of a fixed site, and a time duration of a next transmission state of a fixed site (see col. 8, lines 50-67 and col. 9, lines 1-2). Eswara does teach a minimum time duration of a period of non-use between transmissions (see col. 5, lines 22-25). Sun does teach a center frequency of a transmitter and receiver (see abstract, col. 5, lines 7-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include a message that includes a next bandwidth and center frequency of a transmitter and a receiver of a fixed site, a minimum time duration of a next receive state of a fixed site, or a minimum time duration of a next transmit state of a fixed site because this would allow for increased efficiency of wireless communication between user devices that demand increased bandwidth for transmission.

Regarding claim 9 Dunn and Eswara teach a device as recited in claim 1 except for signaling an in-band message to inform newly joining mobile stations of a present channel configuration. Dunn does teach a message to inform mobile stations of a present channel configuration (see col. 12, lines 28-35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include an in-band message to inform newly joining mobile stations of a present channel configuration because this would allow for a mobile device to be dynamically allocated available communication channels.

Regarding claim 10 Dunn and Eswara teach a device as recited in claim 1 except for invoking a wideband channel when wideband services are needed; and invoking non-interfering narrowband channels within a domain of the wideband channel when wideband services are not needed. Sun teaches invoking a wideband channel when wideband services are needed (see col.

4, lines 14-17). Eswara does teach non-interfering channels (see col. 4, lines 60-63). Sun teaches using narrowband channels in a way to minimize interference within a domain of the wideband channel (see col. 3, lines 55-60 and 4, lines 34-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include invoking a wideband channel when wideband services are needed; and invoking non-interfering narrowband channels within a domain of the wideband channel when wideband services are not needed because this would allow for improved allocation of radio frequency channels in a cellular network environment.

Regarding claim 12 Dunn teaches signaling performed via at least one fixed site (see col. 4, lines 50-53, 60-61 & 66-67 and col. 8, lines 1-2).

Regarding claim 13 Dunn teaches determining an amount of additional bandwidth required for service (see col. 10, lines 46-50, col. 12, lines 24-32 & 65-67 and col. 13, lines 1-4).

Response to Arguments

Applicant's arguments with respect to claims 1-10 and 12-16 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ramesh U.S. Patent No. 6,256,290 discloses a multi-carrier CDMA transmission system with frequency and transmit diversity.

Pack et al. U.S. Patent No. 6,704,573 discloses a channel resource management method in base station using dynamic function in mobile communication system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon J Miller whose telephone number is 703-305-4222. The examiner can normally be reached on Mon.-Fri. 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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May 5, 2004

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